CLAIM AMENDMENTS

1. (Currently Amended) A hearing aid, comprising:

an input signal channel having a microphone and providing digital input signals;

a signal path adapted to process said digital input signals in accordance with a predetermined signal processing algorithm to produce a digital output signal, wherein said signal path further comprises at least one signal processing function operating on a warped frequency scale, and wherein said at least one signal processing function includes at least one spectral enhancement algorithm; and

an output conversion means adapted to convert said output signals to an audio output.

2. (Original) The hearing aid of claim 1, wherein said at least one signal processing function further comprises a plurality of cascaded all-pass filters.

3. (Original) The hearing aid of claim 1, wherein said warped frequency scale approximates a Bark scale.

4-54. (Cancelled)

55. (Original) A method of processing sound in a hearing aid, comprising the steps of:

receiving acoustical signals within the hearing aid;

~~receiving~~ transforming the acoustical signals into digital input signals;

passing a portion of said digital input signals through a plurality of cascaded all-pass filters to form a sequence of delayed samples;

windowing said sequence of delayed samples;

applying a frequency domain transform to said windowed sequence of delayed samples to form a warped sequence;

calculating a plurality of frequency domain level estimates from said warped sequence;

calculating a plurality of frequency domain gain coefficients from said plurality of frequency domain level estimates to form a warped time-domain filter;

calculating a plurality of spectral enhancement gain coefficients from said warped sequence;

calculating a plurality of compression-spectral enhancement gain coefficients from said plurality of frequency domain gain coefficients and said plurality of spectral enhancement gain coefficients;

applying an inverse frequency domain transform on said plurality of compression-spectral enhancement gain coefficients to form a set of time-domain filter coefficients; and

convolving said sequence of delayed samples with said set of time-domain filter coefficients to produce a digital output signal.

56. (New) The hearing aid of claim 1, wherein the hearing aid is configured to be mounted on the ear of a user.

57. (New) The hearing aid of claim 1, wherein the hearing aid is an in-the-canal hearing aid.

58. (New) The hearing aid of claim 1, wherein the hearing aid is an in-the-ear hearing aid.

59. (New) The hearing aid of claim 1, wherein the hearing aid is a behind-the-ear hearing aid.

60. (New) The method of claim 55, wherein the hearing aid is configured to be mounted on the ear of a user.

61. (New) The method of claim 55, wherein the hearing aid is an in-the-canal hearing aid.

62. (New) The method of claim 55, wherein the hearing aid is an in-the-ear hearing aid.

63. (New) The method of claim 55, wherein the hearing aid is a behind-the-ear hearing aid.